

ABSTRACT

A light-emitting diode (LED) structure with electrostatic discharge (ESD) protection is described. The LED includes a substrate, a patterned semiconductor layer, a first electrode and a second electrode. The patterned semiconductor layer is disposed over the substrate, and is divided into at least a first island structure and a second island structure. The first electrode and the second electrode are connected between the first island structure and the second island structure. A shunt diode is formed by the first electrode, the second electrode and the second island structure. The shunt diode is connected in parallel to the LED with an inverse voltage compared to the LED. In the LED structure of the invention, the first island structure and the second island structure are manufactured simultaneously by the epitaxy procedure. Therefore, the LED could be protected from damage due to electrostatic discharge (ESD).